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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,631	07/19/2006	Hironori Suzuki	293591US0X PCT	6096

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EXAMINER	
TAKEUCHI, YOSHITOSHI	
ART UNIT	PAPER NUMBER
1793	

NOTIFICATION DATE	DELIVERY MODE
05/14/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/586,631	SUZUKI ET AL.	
	Examiner	Art Unit	
	YOSHITOSHI TAKEUCHI	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 March 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 July 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-25 are presented for examination, wherein claim 12 is currently amended and claims 15-25 are newly added.

2. The objections to claims 9 and 12 are withdrawn as a result of the applicant's explanation of how persons skilled in the art would interpret the ratios.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-5 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rieckert et al (US 5,952,274).

a. Claims **1-5** are rejected under 35 U.S.C. 103(a) for the same reasons as set forth in the prior action.

b. Regarding claim **15**, Rieckert teaches the composition of claim 2, wherein R_1 has 5 carbons atoms (column 1, line 67).

c. Regarding claim **16**, Rieckert teaches the composition of claim 2, wherein R_3 is a hydrogen atom (column 2, lines 1-2, where N-substituted amides would have R_3 with a hydrogen atom).

5. Claims 6, 7, 9-14, 17, 18, and 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rieckert et al (US 5,952,274) as applied to claims 1-2 and 15 above, and further in view of Storstrom (WO 95/33589).

a. Claims **6**, **7**, and **9-14** are rejected under 35 U.S.C. 103(a) for the same reasons as set forth in the prior action, except claim 12 depends from claim 10, instead of claim 1.

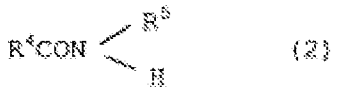
b. Regarding claim **12**, Rieckert in view of Storstrom teaches the composition of claim 10. Storstrom teaches the fatty acid and that it can be used in a mixture with other lubricants, such as amide wax types (page 7, lines 8-11), but does not teach a mixture of amide wax type lubricant to fatty acids in a ratio by mass from 20/80 to 100/0.

However, "where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456 (CCPA 1955). See also MPEP § 2144.05(II). In this case, Storstrom does not specify the workable ranges for a mixture of amide type lubricant to fatty acids in a ratio by mass from 20/80 to 100/0, but it does describe the general conditions of the claim, namely the fatty acid and that it can be used in a mixture with other lubricants, such as amide wax types. It would not be inventive to discover the workable ranges by routine experimentation of the invention taught by Storstrom mixed in the lubricant of Rieckert.

c. Regarding claim **17**, Rieckert teaches the composition of claim 2 but does not teach a mean particle size of from 1 to 300 microns. Storstrom teaches a lubricant for metal-powder compositions where the average particle size of the lubricant is preferentially in the range of 3 to 100 microns in order for the lubricant to leave pore structure of the metal-powder composition during the compaction (page 7, lines 15-25).

As a result, it would have been obvious to a person of ordinary skill at the time of the invention to use the lubricant of Rieckert with particle sizes in the range of 3-100 microns in order for the lubricant to leave the pore structure of a metal-powder composition during the compaction, as taught by Storstrom (page 7, lines 15-25).

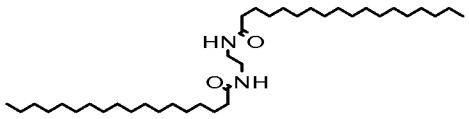
d. Regarding claim **18**, Rieckert teaches the composition of claim 2 but does not teach an auxiliary lubricant and in which the auxiliary lubricant is at least one selected from a metal soap, an alkylenebis fatty acid amide and a fatty acid amide of the following formula (2):



(2)

Where R_4 represents a hydrocarbon group having from 7 to 29 carbon atoms; R_5 represents a hydrogen atom, or a hydrocarbon group having from 1 to 30 carbon atoms.

Storstrom teaches ethylenebisstearamide is a metal-powder lubricant (page 3, line 13) with the following structure:



Here, R_4 has 11 carbon atoms and R_5 has 14 carbon atoms. Furthermore, Storstrom teaches the composition may contain other lubricants, such as amide wax types (page 7, lines 8-11).

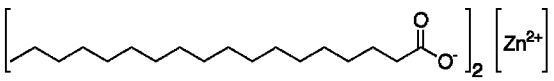
As a result, it would have been obvious to a person of ordinary skill at the time of the invention to combine the metal-powder lubricants of Rieckert and Storstrom because Storstrom teaches that such a mixture is suitable for making sintered metal products via warm compaction.

e. Regarding claim **20**, Rieckert teaches the composition of claim 18 but does not teach an auxiliary lubricant. Storstrom teaches the auxiliary lubricant and that it can be used in a mixture with other lubricants, such as amide wax types (page 7, lines 8-11), but

does not teach a mixture of amide wax type lubricant to auxiliary lubricant in a ratio by mass from 30/70 to 100/0.

However, "where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456 (CCPA 1955). See also MPEP § 2144.05(II). In this case, Storstrom does not specify the workable ranges for a mixture of amide wax type lubricant to auxiliary lubricant in a ratio by mass from 30/70 to 100/0, but it does describe the general conditions of the claim, namely the auxiliary lubricant and that it can be used in a mixture with other lubricants, such as amide wax types. It would not be inventive to discover the workable ranges by routine experimentation of the invention taught by Storstrom mixed in the lubricant of Rieckert.

f. Regarding claims **21** and **22**, Rieckert in view of Storstrom teaches the composition of claim 18, which further contains a fatty acid, wherein the fatty acid is a saturated aliphatic monocarboxylic acid having from 18 carbon atoms (page 7, lines 8-11, where the stearate in zinc stearate is an aliphatic monocarboxylic acid with 18 carbon atoms)



Furthermore, Storstrom teaches the composition may contain other lubricants, such as amide wax types (page 7, lines 8-11). As a result, it would have been obvious to a person of ordinary skill at the time of the invention to combine the metal-powder lubricants of Rieckert and Storstrom because Storstrom teaches that such a mixture is suitable for making sintered metal products via warm compaction.

g. Regarding claim **23**, Rieckert in view of Storstrom teaches the composition of claim 18. Storstrom teaches the fatty acid and that it can be used in a mixture with other lubricants, such as amide wax types (page 7, lines 8-11), but does not teach a mixture of amide wax type lubricant to fatty acids in a ratio by mass from 20/80 to 100/0.

However, "where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456 (CCPA 1955). See). See also MPEP § 2144.05(II). In this case, Storstrom does not specify the workable ranges for a mixture of amide type lubricant to fatty acids in a ratio by mass from 20/80 to 100/0, but it does describe the general conditions of the claim, namely the fatty acid and that it can be used in a mixture with other lubricants, such as amide wax types. It would not be inventive to discover the workable ranges by routine experimentation of the invention taught by Storstrom mixed in the lubricant of Rieckert.

h. Regarding claim **24**, Rieckert teaches the composition of claim 15 but does not teach mixing the lubricant and a metal powder. However, Storstrom teaches amide wax types are useful metal-powder lubricants (page 7, lines 8-11, where the composition of Rieckert is an amide type lubricant taught by Storstrom).

As a result, it would have been obvious to a person of ordinary skill at the time of the invention to use the lubricant of Rieckert with powder metallurgy because Storstrom teaches amide waxes, such as the Rieckert lubricant, can be used in powder metallurgy as a lubricant.

i. Regarding claim **25**, Rieckert teaches the composition of claim 15 but does not teach a method for producing a sintered body, comprising shaping a mixed powder for powder metallurgy of claim 13 through compression followed by sintering it. However, Storstrom teaches shaping a metal-powder composition though compaction (page 1, line 8) with an amide type lubricant (page 7, lines 8-11, where the composition of Rieckert is an amide type lubricant taught by Storstrom) followed by sintering (page 1, line 6).

6. Claims **8** and **19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rieckert et al (US 5,952,274) in view of Storstrom (WO 95/33589) and further in view of Raza (US 6,323,159).

a. Claim **8** is rejected under 35 U.S.C. 103(a) as being unpatentable for the same reasons as set forth in the prior action.

b. Regarding claim **19**, Rieckert in view of Storstrom teaches the auxiliary lubricant of claim 18, but does not teach the auxiliary lubricant chosen from either (N-octadecenyl)hexanoic acid amide or (N-octadecyl)docoseoic acid amide. Raza teaches a lubricant composed of thermoplastic polyurethane and an amide (abstract) for use with metal parts (column 1, line 23). Furthermore, Raza teaches the amide component of the lubricant is preferably N-oleyl palmitamide (abstract), which is a common name for (N-octadecenyl)hexanoic acid amide.

As a result, it would have been obvious to a person of ordinary skill at the time of the invention to use an auxiliary lubricant composed of N-oleyl palmitamide with the lubricant of Rieckert for use with powder metallurgy, since Storstrom teaches that such a mixture is suitable for making sintered metal products via warm compaction.

Response to Arguments

7. Applicant's arguments filed March 27, 2009 have been fully considered but they are not persuasive.

a. First, the applicant argues Rieckert "does not 'broadly [teach]' polyhydroxycarboxyl amides with an R2 hydrocarbon group of from 8 to 30 carbon atoms." (Response to Office action p.8).

In response, Riechert covers all polyhydrocarboxylamide in dietary foods and sugar substitutes, not just the amides of sugar acids with only 5 to 7 C atoms." A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. Merck & Co. v. Biocraft Laboratories, 874 F.2d 804 (Fed. Cir.), *cert. denied,* 493 U.S. 975 (1989). See MPEP § 2123.

b. Second, the applicant argues Rieckert's polyhydrocarboxylamides is disclosed for use in metal working fluids and hydraulic fluids, not as a lubricant for powder metallurgy.

In response, the application is for a composition, not for a process. "A lubricant for powder metallurgy" does not structurally limit the claim such that it would distinguish from the prior art structure. See MPEP 2111.02(II).

c. Third, the applicant argues there is no nexus for combining references of lubricants intended for powder metallurgy and other types of lubricants such as for metal working fluids.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See In re Fine, 837 F.2d 1071 (Fed. Cir. 1988) and In re Jones, 958 F.2d 347 (Fed. Cir. 1992). In this case, Storstrom teaches the use of "other lubricants, such as…lubricants of amide wax type" (page 7, lines 9-11), which does not limit the lubricants to only those for use in powder metallurgy, and Rieckert teaches such a lubricant. A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. Merck & Co. v. Biocraft Laboratories, 874 F.2d 804 (Fed. Cir.), *cert. denied,* 493 U.S. 975 (1989). See MPEP § 2123(I).

d. Fourth, regarding the rejection of claim 8, the applicant argues Raza does not cure the deficiency of Rieckert in view of Storstrom of teaching a particular amide.

In response, please refer to the response to the applicant's arguments *supra*.

e. Fifth, regarding the rejection of claim 8, the applicant argues that "even if the amide of Raza were used in the combination of Rieckert et al and Storstrom et al, the result would still not be the presently-claimed invention."

In response, the examiner respectfully notes that the applicant did not particularly explain the rationale for such an argument. When a *prima facie* case of obviousness is established, the burden shifts to the applicant to come forward with arguments and/or

evidence to rebut the *prima facie* case. See e.g., In re Dillon, 919 F.2d 688, 692 (Fed. Cir. 1990). See MPEP § 2145.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOSHITOSHI TAKEUCHI whose telephone number is (571) 270-5828. The examiner can normally be reached on Monday-Thursday 9:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Supervisory Patent Examiner, Art Unit 1793

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Examiner, Art Unit 1793